

- 15 -

**CLAIMS:**

1. A fastening arrangement for use with a curved lens having a first face, a second face and a bore passing between them and having a longitudinal axis slanted to the lens's faces, for attaching to said lens a component at the first face of the lens;  
5 the fastening arrangement comprising a fastener having a lens-face engaging portion adapted to engage the second face of the lens and a component engaging portion entering the bore at said second face; said fastening arrangement further comprising a fastener engaging portion in said component adapted to engage said component engaging portion of the fastener; all the engaging portions being  
10 designed so that, when the component and the lens are assembled, the lens-face engaging portion is oriented along said second face of the lens.
2. The fastening arrangement according to claim 1, wherein said fastener has a head and a stem with a longitudinal axis, said stem constituting said component engaging portion.
- 15 3. The fastening arrangement according to claim 2, wherein said head has a bottom surface constituting said lens-face engaging portion.
4. The fastening arrangement according to claim 3, wherein said stem of the fastener is coaxial with said bore in the lens and said bottom surface of the fastener's head is slanted with respect to said longitudinal axis of the stem so as to  
20 be oriented along said second face of the lens, when the lens and the component are assembled.
5. The fastening arrangement according to claim 2, wherein said fastener comprises a lens-face engaging member having a lower surface that constitutes a lens-face engaging surface and a top surface adapted to engage said head, said  
25 member having a through bore coaxial with said bore of the lens.
6. The fastening arrangement according to claim 5, wherein said lower surface is slanted with respect to said longitudinal axis of the stem so as to be oriented along said second face of the lens when the lens and the component are assembled.

– 16 –

7. The fastening arrangement according to claim 5, wherein the lens-face engaging member comprises means to facilitate fixing its position relative to the lens.
8. The fastening arrangement according to claim 7, wherein said means is in the form of a projection and said component is L-shaped and has a ledge formed with said fastener engaging portion and a leg to support the lens's edge, said means interfacing said leg.
9. The fastening arrangement according to claim 7, wherein said means is in the form of a projection interfacing with the lens.
- 10 10. The fastening arrangement according to claim 5, wherein said lens-face engaging member has a recess in its top surface formed around said through bore and a shoulder in said recess surrounding said bore, with which said head of the fastener interfaces.
11. The fastening arrangement according to claim 10, wherein the shoulder is designed such that the longitudinal axis of the stem is parallel to that of the bore.
12. The fastening arrangement according to claim 10, wherein said recess has a depth greater than the height of the fastener's head.
13. The fastening arrangement according to claim 1, wherein the component engaging portion has a longitudinal axis normal to said second face of the lens.
- 20 14. The fastening arrangement according to claim 1, wherein the component engaging portion has a longitudinal axis parallel to the longitudinal axis of the bore.
15. The fastening arrangement according to claim 1, wherein said component is formed with a plug received within said bore, said plug being formed with a cavity constituting said fastener engaging portion having a longitudinal axis.
- 25 16. The fastening arrangement according to claim 15, wherein said longitudinal axis is slanted with respect to the second lens face.
17. The fastening arrangement according to claim 1, wherein the component engaging portion of the fastener connects to the fastener engaging portion of the component in a male-to-female configuration, respectively.

- 17 -

18. The fastening arrangement according to claim 1, wherein the component engaging portion of the fastener connects to the fastener engaging portion of the component in a female-to-male configuration, respectively.

19. The fastening arrangement according to claim 1, wherein the component  
5 comprises a lens interfacing surface with spherically shaped portion which interfaces with the bore to ensure full contact therebetween, when the fastener engaging portion of the component engages the component engaging portion of the fastener.

20. The fastening arrangement according to claim 19, wherein said spherically  
10 shaped portion is a non-integral part of said component.

21. The fastening arrangement according to claim 1, wherein the component has a ledge which is curved and corresponds with the first face of the lens.

22. The fastening arrangement according to claim 1, wherein the lens has an edge and the component is L-shaped and has a ledge formed with said fastener  
15 engaging portion and a leg having a lens-edge interfacing portion.

23. The fastening arrangement according to claim 22, wherein said edge of the lens and said lens-edge interfacing portion of the component have inter-engaging parts to minimize movement between the lens and the component.

24. The fastening arrangement according to claim 23, wherein said inter-  
20 engaging parts has a male-female design.

25. The fastening arrangement according to claim 24, wherein said inter-engaging parts are in the form of a projection formed at the edge of the lens and a corresponding indentation formed in said lens-edge interfacing portion of the component.

26. The fastening arrangement according to claim 24, wherein said parts are in  
25 the form of a projection formed at said lens-edge interfacing portion of the component and a recess formed in the edge of the lens, said recess being disposed between bulges protruding from said edge.

- 18 -

27. The fastening arrangement according to claim 1, wherein said component engaging portion of the fastener and the fastener engaging portion of the component are inter-engageable in a threaded fashion.

28. The fastening arrangement according to claim 27, wherein the fastener is  
5 formed with an arm connected therewith via a neck and designed to disconnect therefrom at said neck at a predetermined fastening torque upon the inter-engagement between the fastener engaging portion and the component engaging portion.

29. The fastening arrangement according to claim 28, wherein the fastening  
10 arrangement further comprises a tool adapted to hold the arm.

30. The fastening arrangement according to claim 29, wherein the tool comprises a sleeve designed to fit over at least a portion of the arm.

31. The fastening arrangement according to claim 1, wherein the component is a clip of an eyeglass clip-on.

15 32. A fastening member for use in attaching a component to a lens, the lens having a through bore and the component comprising a fastener engaging portion and being adapted for the attachment to the lens at the bore via a fastener having a component engaging portion, the component further comprising a spherically shaped portion which interfaces with the bore to ensure full contact therebetween,  
20 when the fastener engaging portion of the component engages the component engaging portion of the fastener.

33. The fastening arrangement according to claim 32, wherein said spherically shaped portion is a non-integral part of said component.

34. An eyeglass assembly comprising a component, a lens and a fastening  
25 arrangement as described in claims 1 - 33.

35. A fastening arrangement for assembly of a component to a lens, the lens having an edge and the component being L-shaped and having a ledge formed with a fastener engaging portion and a leg having a lens-edge interfacing portion, wherein said edge of the lens and said lens-edge interfacing portion of the

- 19 -

component have inter-engaging parts to minimize movement between the lens and the component.

36. The fastening arrangement according to claim 35, further comprising means for attaching said component to said lens at a location spaced from the lens's  
5 edge.

37. The fastening arrangement according to claim 35, wherein said inter-engaging parts are adjacent said location.

38. The fastening arrangement according to claim 35, wherein said inter-engaging parts have a male-female design.

10 39. The fastening arrangement according to claim 35, wherein said inter-engaging parts are in the form of a projection formed at the edge of the lens and a corresponding indentation formed in said lens-edge interfacing portion of the component.

40. The fastening arrangement according to claim 35, wherein said inter-  
15 engaging parts are in the form of a projection formed at said lens-edge interfacing portion of the component and a recess formed in the edge of the lens, said recess being disposed between bulges protruding from said edge.

41. An eyeglass assembly comprising a component and lens as described in claims 35 - 40.

20 42. A fastening arrangement for assembly of a component to a lens comprising a bore passing therethrough; the fastening arrangement comprising a threaded fastener for entering said bore and a fastener engaging portion, the fastener comprising an arm connected therewith via a neck and designed to disconnect therefrom at said neck at a predetermined fastening torque upon the inter-  
25 engagement between the fastener and the fastener engaging portion.

43. The fastening arrangement according to claim 42, wherein the fastening arrangement further comprises a tool adapted to hold the arm.

44. The fastening arrangement according to claim 43, wherein the tool comprises a sleeve designed to fit over at least a portion of the arm.

- 20 -

45. A component designed for attaching to a curved lens having a first face, a second face and a bore passing between them and having a longitudinal axis slanted to the lens's faces; the component comprising a fastener engaging portion designed for inter-engaging with a fastener entering the bore at said first face, the fastener engagement portion being designed for entering the bore at said second face and having a longitudinal axis normal to the first face so that, when the component and the lens are attached, the fastener has an interface oriented along the first face of the lens.

46. A component designed for attaching to a curved lens having a first face, a second face and a bore passing between them and having a longitudinal axis slanted to the lens's faces; the component comprising a fastener engaging portion designed for inter-engaging with a fastener entering the bore at said first face and aligning the fastener with the bore; the component further comprising a first and second lens-face engaging portions engageable respectively with said first and second faces so that, when the component and the lens are attached, the lens-face engaging portions are oriented along the first and second faces of the lens.

47. A non-threaded fastener designed for use in attaching a component to a curved lens having a first face, a second face and a bore passing between them and having a longitudinal axis slanted to the lens's faces; the fastener comprising a lens-engaging portion and a component engaging portion, the lens engaging portion being slanted with respect to the component engaging portion's axis so that, when the lens-face engaging portion of the fastener is oriented along the first and second faces of the lens.

48. A threaded fastener designed for use in attaching a component to a curved lens having a first face, a second face and a bore passing between them and having a longitudinal axis slanted to the lens's faces; the component comprising a fastener engagement portion; the fastener comprising a head with an arm connected therewith via a neck and designed to disconnect therefrom at said neck at a predetermined fastening torque upon the inter-engagement between the fastener and the fastener engaging portion.

- 21 -

49. A component designed for attaching to a curved lens having a first face, a second face and a bore passing between them and having a longitudinal axis slanted to the lens's faces; the component comprising a spherically shaped portion which interfaces with the bore to ensure full contact therebetween, when the component is  
5 attached to said lens.

50. A curved lens designed for having attached thereto a component, the lens having an edge, a first face, a second face and a bore passing between them and having a longitudinal axis slanted to the lens's faces; the component being attachable to the lens at said bore, the lens comprising one or more component  
10 engaging parts at its edge for inter-engaging with the component to thereby minimizing movement between the lens and the component.

51. A component designed for attaching to a curved lens having an edge, a component engaging portion at said edge, a first face, a second face and a bore passing between them having a longitudinal axis slanted to the lens's faces; the  
15 component being attachable to the lens at said bore and comprising a lens engaging part formed for inter-engaging with the lens to thereby minimize movement between the lens and the component.